

What is claimed is:

1. A pharmaceutical composition comprising a therapeutically effective amount of N3PT and a pharmaceutically acceptable carrier.
2. The composition of embodiment 1, further comprising at least one chemotherapeutic agent, antiangiogenic agent or agent which modulates signalling associated with hypoxic conditions in a cell.
3. The composition of embodiment 1, wherein the therapeutically effective amount of N3PT is coupled to a conjugate which aids in its delivery to the mammal.
4. The composition of embodiment 3, wherein the conjugate aids in N3PT delivery to a tissue selected from the group consisting of lymphatic tissue, blood, kidney, liver, lung, spleen, brain, prostate, ovary, breast, pancreas, intestine, bladder and skin.
5. A method for inhibiting transketolase activity in a cell comprising administering to the cell an effective amount of N3PT.
6. A method for reducing production of ribulose/ribose-5-phosphate in a cell comprising administering to the cell an effective amount of N3PT.
7. A method for inhibiting nucleic acid synthesis in a cell comprising administering to the cell an effective amount of N3PT.
8. A method for inhibiting cell proliferation comprising administering to the cell an effective amount of N3PT.
9. A method for increasing apoptosis in a tumor cell comprising administering to the cell an effective amount of N3PT.

10. A method for reducing tumor growth in a mammal comprising administering an effective amount of N3PT to the mammal in need thereof.

11. The method of embodiment 10, further comprising administering at least one chemotherapeutic agent, antiangiogenic agent or agent which modulates signalling associated with hypoxic conditions in a cell.

12. The method of embodiment 10 or 11, further comprising the step of limiting thiamine concentrations in the mammal during the administration step.

13. The method of embodiment 12, wherein the mammal is on a reduced thiamine diet during the administration step.

14. The method of embodiment 13, wherein cellular thiamine concentrations are maintained at a level sufficient to avoid toxicity associated with thiamine deficiency.

15. A method for reducing the growth of a tumor in a mammal, comprising the steps of: identifying the tumor as a TK-reliant tumor; and administering to the mammal a therapeutically effective amount of N3PT.

16. The method of claim 15, wherein the step of identifying the tumor as a TK-reliant tumor comprises metabolic profiling.

17. The method of claim 16, further comprising the step of obtaining a tumor biopsy sample.